a' cont

a supporter for supporting the single crystalline nitride film and the parent substrate and maintaining the single crystalline nitride film in a predetermined temperature.

14. The apparatus as recited in claim 13, wherein the apparatus is a hydride vapor phase epitaxy apparatus.

15. The apparatus as recited in claim 13, wherein the predetermined temperature is in a range of 600 °C to 1000 °C.

16. The apparatus as recited in claim 13, wherein the apparatus further comprises an exhausting chamber positioned between the reacting chamber and the heating chamber, and wherein each of reacting, exhausting and heating chambers is isolated from each other by shutters.

438 17. A method for forming a nitrogen compound semiconductor substrate, the method comprising the steps of:

a) preparing a parent substrate;

b) forming a single crystalline nitride film on the parent substrate in a reacting chamber;

c) moving the parent substrate onto a heating chamber and maintaining the single crystalline nitride film in a predetermined temperature which is higher than a room temperature; and

d) illuminating laser beam on a backside of the parent substrate and separating the single crystalline nitride film from the parent substrate.

18. The method as recited in claim 17, further comprising the steps of:

e) heating the parent substrate up to a predetermined

a1 cont

temperature which is higher than a room temperature; and

f) moving onto a supporter the parent substrate on which the single crystalline nitride film is formed, wherein the supporter is positioned in a heating chamber which is connected to the reacting chamber within a processing channel.

19. The method as recited in claim 17, wherein the parent substrate is selected from one of sapphire (Al_2O_3), spinel ($MgAl_2O_4$) or silicon carbide (SiC).

20. The method as recited in claim 19, wherein the single crystalline nitride film is formed by a hydride vapor phase epitaxy.

√21. The method as recited in claim 19, wherein the step b) comprises the steps of:

a1) positioning a material selected from a group III at a first temperature region of 600 °C to 900 °C in the reacting chamber and positioning the parent substrate at a second temperature region of 1000 °C to 1100 °C in the reacting chamber;

a2) injecting a nitrogen gas into the reacting chamber;

a3) injecting a hydrochloric acid gas into the reacting chamber; and

a4) injecting an ammonia gas into the reacting chamber.

22. The method as recited in claim 9, wherein the parent substrate is heated up to 600 °C to 1000 °C.

23. The apparatus as recited in claim 21, wherein the apparatus further comprises an exhausting chamber positioned between the reacting chamber and the heating chamber, and wherein each of the reacting, exhausting and heating chambers is isolated from each other by shutters.